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ABSTRACT

The author presents a process of developing individual observation designs, with the primary objectives of (1) initiating continual self-reflection upon teaching experiences using individual perceptions of what is important; and (2) establishing an open system of articulation and interaction between observing in classrooms and establishing for one's self a set of criteria with which to examine educational activities. The long range goal in formulating an observational design is described as the establishment of a personal statement of philosophy of education. The process activities in design formulation include: (1) reflection on previous educational experiences and extrapolation of critical variables; (2) viewing of videotapes of classroom situations and eliciting success/failure variables; (3) selection of classroom behaviors of personal significance, and asking how one could observe them in the classroom; (4) acquiring a general knowledge base; and (5) discussing, in small group interaction with peers, objective means for observing intentions, behavior, or values within the classroom. Implications for supervision and curriculum development of such idiosyncratic observational designs and their system of utilization are discussed. (MJB)

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POTENTIATING IDIOSYNCRACY--

Generating Personal Observational Systems for Supervision

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Potentiating Idiosyncrasy—

Generating Personal Observational Systems for Supervision

The child at play with his blocks and the teacher within a classroom share something in common: each responds idiosyncratically to his immediate environment. That is, each responds creatively to observed problems posed by his interaction with the blocks or with students attempting to learn a specific concept or skill.

Child's play has been defined by Brian Sutton-Smith (1975) as the "potentiation of novelty," as variation seeking and as the imaginative transformation of the realities found in our surroundings, be they paper cartons turned into houses or the imaginative flights of fancy of an adult.

Teaching is not child's play, as perhaps many of us have come to realize! However, enabling teachers to react idiosyncratically to classroom encounters in accordance with their own teaching styles, goals and values is one of the supervisor's tasks as a collaborator and partner in the improvement of instruction. Adults can model play responses for children, thus enhancing a child's play—making it more imaginative, more full of pretend characters, for example. So too can a supervisor enhance the teacher's attainment of his or her personal pattern of interaction with students. This can be done through modelling or through a process of developing one's own model of teaching. Specifically, what is being suggested is that rather than present teachers with Joyce's Models of Teaching (1972), that we enable them to develop their own models, create their own metaphors.

The supervisor can be, therefore, a potentiator of novelty and this paper outlines an approach to developing, creating, individual models for teachers. More specifically, what will be presented here is a process of supervision involving the creation of idiosyncratic observational designs by teachers to be used in a cycle of supervision, the end result of which is, hopefully, the improvement of instruction more in accordance with one's own perceived goals and values than with those of another person.

We know not only from the vast body of literature on institutional change and the diffusion of innovations (Carlson, 1965) but also from the literature of human psychology as well that we are willing, indeed eager, to assume or at least attempt new behaviors if we perceive the need for them, if they appear to be viable solutions to problems we identify and wish to solve ourselves, or if they appear to be in accord with our personal and/or professional values. Kelman (1972) cites such change as "internalization" of values as opposed to change motivated by compliance or role identification. In view of what we know about the processes and motivations for change, therefore, it would appear that an approach to the improvement of instruction based upon teachers' self-direction and analysis would be a viable and worthy one.

Flanderization: Necessity or Nuisance?

To date most observation systems have been created by educational researchers with particular points of view, special areas of focus: cognitive language processing (Bellack), social/emotional climate (Flanders), uses of non-verbal behavior (Love-Roderick), and openness and closedness of teacher student interaction (Macdonald-Zaret).¹ The purpose of many of these designs is descriptive, not prescriptive,

although it may be difficult to prevent the former from flowing or developing into the latter. It has occurred to me as well as to others² that what we who educate teachers ought to be doing is helping people to personalize their teaching styles rather than attempting to initiate them into somebody else's research model of teaching, such as that of Ned Flanders. Thus, rather than educating teachers by a process of "Flanderization," we might encourage the development of evaluative criteria derived from teachers' own experiences, values and the self-perceived goals of what a good educational activity should be.

The Design Process

The process described below has evolved during this writer's work in preservice teacher education and with perhaps slight modification is equally applicable to inservice supervisory practices where our responsibility is the improvement of instruction through a collaborative effort.

The developmental process of formulating one's own Design for observation of teaching is, of course, a statement of philosophy, as are the aforementioned research instruments. This statement reflects our conceptions of several salient aspects of the educational process. For example, the nature of the teaching process--is it primarily telling, or problem-posing (Freire) or relating (Buber)--the nature of the learning process--is it a process of absorbing facts, of problem-solving (Dewey) or of acting upon the stuff of this world (Piaget); and the nature of the child--is he a passive receptor, a rational thinker, or a person capable of imaginative transformations of reality? Obviously, we are not suggesting that any one position is exclusive of others or is to be advanced at the expense of another.

Approaching consistent, well-reasoned philosophical positions with respect to these elements of the educational process is an on-going, life-long process, and in the development of an idiosyncratic observational Design one looks for activities which will bring to consciousness some of these view points. These activities should be relatively simple and should help us engage in a self-reflective process, the end result of which will be the establishment of what each of us considers important in the teaching/learning process.

The major process activities teacher interns engaged in in formulating their Designs included the following:

- A. Reflecting on previous, meaningful educational experiences and attempting to extrapolate from them the critical variables, such as Choice, Self-initiated Activity, Teacher Attitude.
- B. Viewing a series of video tapes of classroom teaching situations from which were elicited those elements which contributed either to success or lack thereof, such as Control, Quality of Verbal Interaction, Role Reversal in Games, Use of Space.
- C. Examining possible behaviors demonstrable within a classroom, selecting those of most personal significance (Creativity, Self-Direction, Listening, Concentration, Discipline), and asking how one could observe them within the classroom.
- D. Acquiring a general knowledge base from which to reflect upon such essentials as the nature of curriculum, classroom interaction, research on teaching and learning.³

E. Participation in small group interaction with peers from various disciplines and different grade levels (e.g., secondary History and Science and elementary Speech Therapy and Physical Education). The tasks of these groups included video tape analysis, the planning for and teaching of specific concepts to the class as a whole, as well as probing for objective means of observing specific intentions, values or behaviors within the classroom.

During the course of a week's intensive classes (three hours per day)⁴ these activities helped interns bring to consciousness what were for each of them some significant elements in classroom interaction and to begin determining how they might be observed. As noted above, one of the most significant processes is considered to be small group peer interaction during which participants were exposed to a wide variety of divergent stimuli in terms of values and perspectives. To be more precise, it is important for secondary school science and history teachers to view, discuss and evaluate video-taped protocols of elementary school movement education sessions where creative self-expression is salient. Sharing such perspectives is considered not only as essential to the problem-solving process but essential to developing a perspective of teaching which transcends the constraints of the specific subject one teaches.

Peer interaction of the kind described is the central focus of a strategy for curriculum change developed by Goodlad for ~~IDEA~~ and described by Lieberman, et al. (1973). Developing observational designs for self-evaluation and bringing about curriculum change may seem like quite disparate activities; they are, however, both grounded in concern for the

quality and criteria of good educational activities and a concern for openness to different kinds of experiences. From such openness, noted Dewey (1963a), and Schachtel (1959), we grow as persons and avoid routine and embeddedness in narrow perspectives upon life. The playful person is one who is open to new experiences, and who maintains such openness (what Dewey called "plasticity") by engaging novelty through exploration. Developing and using observational systems require such openness to experience on the part of the teacher and the supervisor if growth is to occur.

If the Designs are to be truly idiosyncratic, there can be no attempt to achieve conformity of essential elements. One of the major themes of this whole process is that a Design is an outward manifestation of one's continual self-reflection upon the nature of the educational activity. Change is, therefore, to be expected, as each Design should represent an on-going problem-solving activity.

Organizing Design Elements

The two Designs presented herein (Fig. 1 and 2) represent slightly different approaches to observing the classroom situation. Each is composed of major categories followed by specific questions the answers to which must be observable or inferrable from the involvement of the class either on or off task. These questions were stimulated naturally by use of video-tapes where, in dealing with such notions as verbal interaction, for example, interns could perceive that one teacher's flow of communication was entirely one way--from teacher to individual students without involving peers in any interaction. The logical questions for observations might be "How does the teacher encourage student-student interaction?" or "Was the teacher a good listener?" or "What kinds of questions are asked?"

Similarly, when a person indicated that Challenge within the classroom was vital he was asked how one could observe whether or not students were indeed being challenged. Responses within various Designs indicate how Challenge might be observed:

"Are students solving problems on their own?"

"Do students contribute creative ideas?"

"Does the teacher stimulate students to intellectual efforts beyond those required for a grade?"

The problem of how to organize one's perceptions, values and goals was solved by suggesting a format exemplified in Figures 1 and 2. All Designs were predicated upon the notion that students' observable involvement was a significant factor. Based upon Bruner's (1960) and Piaget's (1970) concepts that learning involves the transformation of or acting upon content or "stuff of this world" (Lewis & Miel, 1972) such active participation in learning may be inferred from student verbal/non-verbal behavior in classrooms. Of course, not all mental transformations can be inferred from overt behavior, nor should we make the attempt and thereby overlook the student's personal meanings derived from content (Macdonald, 1975). Observing involvement, however, should give us at least some clue about the teacher's success in creating an environment sufficient to stimulate what Dewey (1963b) called a "transaction" between the child and his immediate surroundings.

Thus, student involvement becomes our first concern. Too often observers are content to look only at the teacher's activity. Here, we focus upon how the student is interacting with the teacher, his peers and with his environment and by means of noting verbal and non-verbal actions and responses we hope to infer some degree of mental activity on and off task.

Next, one must determine how to organize the Design. The conceptual framework outlined by Dunkin and Biddle (1974) provided a flexible structure within which to consider Teacher Behavior, Student Behavior, Verbal Interaction, Control, Management Teaching Skills and the quality of the Environment created. Figures 1 and 2 represent two intern designs for observing Physical Education (K-12) and secondary school mathematics, respectively. As one might imagine, several interns chose to integrate within their designs concern for such qualities as Challenge, Creativity and Significance (or Meaningfulness), for example.

Although no concerted effort was made to channel student perceptions and choices toward specific "competencies," the processes of self-reflection, examination of video-taped protocols and the use of the interns' classroom as a laboratory for the study of teaching (interns taught each other the formal content of this course), this developmental process naturally led to our focusing upon the following generic teaching behaviors: structuring/creating learning environments and activities; management/control of classroom behaviors; verbal/non-verbal interaction; and the diagnosis, prescription and evaluation of learning.

Once generated the Designs were shared among peers, in small groups to consider others' experiences and subject matter perspectives. Generating questions often proved difficult and this is where peer interaction proved quite valuable.

Initial Observations

Initial testing was conducted by asking interns to take the Design into various classrooms, to observe and attempt to explain the extent of student involvement in the educational activities presented. Often as

the result of using the Design in this fashion observers noted behaviors (or the lack thereof) which later became part of their own Designs:

- In the class I observed that the students' responses and ideas were the focal points of the class activity . . .
- The teacher gives the impression of having no interest in what students have to say . . .
- The classroom is not 'dominated' by any one. The atmosphere may be compared to a meeting of an interest group. There is a task at hand and the whole group with the teacher as one of the participating members . . . A balance of power exists among all group members so that a comfortable climate for effective communication has been established.

These brief examples illuminate perceptions in the areas of Verbal Interaction and Control of decision making among participants. It is noteworthy that one observer has already chosen a metaphor--the meeting of an interested task group--to characterize the observed environment. Such analogies or models are not only highlighted; they are fostered and encouraged whenever feasible. For if "potentiating idiosyncrasy" means anything, it is fostering individual metaphors for teaching.

The classroom is where a Design demonstrates its efficaciousness; consequently, after such observations of the teaching of others, Designs were appropriately modified to reflect new data.

Designs and the Supervisory Cycle

With a Design that was functional in that its categories reflected areas of concern and its specific questions reflected observable or inferable behaviors, supervision could be undertaken with the Design forming the basic set of values and goals of the teacher.

The supervisory cycle usually consisted of a classroom observation (most of which were video-taped) followed by a conference. The author generally used one of two approaches in these conferences:

- I. The teacher was asked to reflect upon the class conducted and to itemize what he/she felt were its strengths and weaknesses.

With this agenda the conference then proceeded to examine those items specified by the teacher and others suggested by examining the Observational Design. Solutions to perceived problems were then sought.

- II. The teacher was asked to use the Observational Design as an initial guide with which to explore the major incidents of the observed classroom situation.

Subsequently, the conference proceeded to focus upon perceived strengths and weaknesses and to probe for solutions.

The former approach was often used with an intern better able to analyze his or her behavior, while the latter was often an initial approach with the more inexperienced. In either case, the Design provided a structure within which to examine the critical incidents and patterns of student and teacher involvement.

Here are some examples of how the Designs helped teachers to perceive some of these critical areas:

In a general high school concert music class the teacher noted that the session was too teacher directed with insufficient student involvement. (Design question: "How many students are involved?")

In Home Economics the teacher realizes that her demonstrating the making of cream puffs did not capture the attention of all

students and she reflected upon the Design element of Purposefulness: "Do students relate subject matter to the 'real world'? Do activities have meaning for the students immediately? In the future?"

In Industrial Arts (Metal Shop) the teacher concerned with Control reflected upon success of giving students some choice of project and its positive impact upon involvement.

(Design: "Does the teacher let students control some of the subject matter?")

In some instances the teacher's Observational Design did not reflect concern for problems which arose:

In Algebra discipline and control were presenting real difficulties and the teacher realized that one must be concerned with who maintains control and by what means (e.g., effective use of media, questioning and such alternative activities as small group problem-solving).

In Geometry a teacher perceived lack of overall comprehension of the concept of Transformations as requiring consideration of How Content is Presented and the Significance of Content. (Design modified: "Is the significance or meaningfulness of the subject matter explored?")

Of course, we often fall short of complete attainment of our goals and objectives. Confronted with the goals of Creativity, Flexibility and Interaction among students, one teacher began to realize that he was not

achieving these goals and instead of reaching out for assistance withdrew and became rather perturbed about an inability to change his behavior. How does one prevent the onset of frustration when confronted with the real difficulties of teaching for the first time? The best answer is to provide a supportive, warm, helping atmosphere so that the teacher feels his strengths are recognized and that he is being encouraged through dialogue to reach more of his goals.⁵

Alternative Perspectives

These insights into strengths and areas of improvement represent an individual perspective upon one's teaching experience. During the course of the internship there were a number of alternative experiences which stimulated self-evaluation and peer interaction.

- A. Most teachers were video-taped and these taped sessions were analyzed not only by the observed teacher but by his or her colleagues as well. Such tapes presented cross-disciplinary approaches to common problems and afforded young teachers with an opportunity to perceive elements common to teaching no matter what the subject: e.g., the presence of Alternatives or the Significance of content.
- B. Peer observation using the Designs afforded teachers an opportunity to learn from each other and to apply their own criteria to another's teaching, thereby affording the observed teacher with more input to his or her teaching.

The use of video-tape was perhaps the most effective way of increasing the awareness of what occurred and challenging the teacher to examine

in more detail critical elements such as the kinds of questions asked:

Synthesis and Evaluation questions are not as frequently employed as I would like and I am making a conscious effort to incorporate more of them . . . as was evident in my video-tape, the challenge problem gave students a chance to interact with each other on some of these more sophisticated skills. . .

Analyzing such tapes also afforded supervisor and teacher another input for the modification of the original Design. Thus, the developmental process maintained an openness to new experiences and the Designs were not allowed to become static representations of a novice's perceptions. Openness to experience and a willingness to view it from different perspectives are characteristics of the flexible, creative and adaptive person. They are also characteristics of the young child at play within his own environment.

Final Evaluations

In an attempt to solidify the potential of these Designs for becoming an initial statement of educational philosophy for each of the teachers, they were asked to use their criteria to reflect upon their entire teaching experience:

In my last few weeks of teaching I noticed that we had become a unified group with everyone sharing control. We had achieved the "balance of power" I spoke of in my observational design.

An area in which I feel remiss is the meaningfulness of the content to the students. Why should they learn French?

There are a variety of strategies I've employed, adopting new ones to different situations (i.e., math classes in band rooms and humanities auditoriums). Flexibility and Balance are important; the flow of the class is generally from tight control to looser control--more student control of activities toward the end of the session with a challenge problem.

These self-evaluative projections of future goals made the supervision more stimulating for both persons involved and the fact that they arose from evaluating experience, not with Flanders', Bellack's, or Barell's categories but from individual teachers' perceptions of goals and values, made them more meaningful and perhaps formed the basis for continual reflection upon one's teaching in the ensuing years.

Summary and Conclusions

The process outlined here was developed with pre-service teachers; however, the elements of this process are certainly translatable to the cycle of supervision for more experienced teachers.

The two primary objectives of this process were:

1. to initiate the continual self-reflection upon teaching experiences using individual perceptions of what is important
- and 2. to establish an open system of articulation and interaction between observing in classrooms and establishing for one's self a set of criteria with which to examine educational activities.

The implications for supervision and curriculum development of such idiosyncratic observational designs and their system of utilization would seem to include the following:

1. Using teacher's own perceptions diminishes the power conflict between supervisor and teacher and facilitates the establishment of a positive environment in which to work toward instructional improvement.
2. The undertaken self-reflections, hopefully, would be on-going with a teacher's attitudes and values developing with empathic guidance from the supervisor who never plays the role of passive acceptor of what is given. The supervisor has positive input at every stage.
3. A process vital in curriculum development is initiated and that is the establishment of evaluative criteria with which we answer the question: What is a good educational activity?
4. Such a process if engaged in cooperatively amongst peers could be the basis not only for joint improvement of instruction within classrooms, but also for curricular revision as well, a process often best initiated by groups of teachers assessing strengths and weaknesses and planning alternatives. (Lieberman, 1973)
5. The peer interaction strategies used to develop and modify these Designs fostered the notion that teaching is more than talking at students and includes concepts such as teaching as problem-imposing (Freire) and teaching as dialogue (Buber).

The formulation of an Observational Design has as its long-range goal the establishment of a personal statement of philosophy of education. A Design is, therefore, a beginning statement to be revised and transformed

in the smithy of one's imagination just as the child over the years reevaluates and restructures the meanings he attaches to objects and persons he brings into his play. For both the teacher and the child at play, a Design and a toy help potentiate their idiosyncratic response to their environments. Growing as a teacher and developing as a child through play are processes in which we engage novelty, develop idiosyncratic, personalized response repertoires, thereby maintaining our openness to the world and establishing meaning for our lives.

Classroom Observational Design
(Physical Education)

Fig. 1

Involvement: Record extent/level of general student participation.
Quantity Teacher/Student Questions, Statements, Responses.
Note number of active participants.
Note number of students interacting with one another on/off topic.

Teacher/Student Interaction

Are the students given time to assist, encourage, interact with one another?
Is there some time spent where there is student/teacher interaction?
Does the teacher offer sincere and meaningful comments, encouragement and criticisms?
Do the students and teacher receive and supply feedback and reinforcement?
Does the teacher move throughout the room?
Is maximum available time spent in movement experiences?

Are the majority of the students active participants?

Purposefulness (Significance)

Does the activity relate to the students' growth, needs, interests and concerns?
Can the observer notice general objectives? Do these objectives appear to be meaningful?
Does the activity offer a challenge to the individual? Are there opportunities to develop independence or self-direction?
Are the students aware of the reasons for teaching the lesson? How it relates to the unit or overall content?

Atmosphere (Environment)

Does the teacher encourage activity, openness, effort, interaction, questions?
Is the class relaxed and friendly? Are the students called by name?
Does eye contact go throughout the room?
Are all situations handled fairly, in a like manner?
Does the teacher communicate enthusiasm? Do the students exhibit enthusiasm?
Does the teacher, and do the students laugh and smile?

Management (Control)

Who makes the decisions as to content and means of presentation? How?
Does the teacher allow for alternative activity based on students' needs and interests?
Are routine procedures handled quickly and effectively?
Is equipment set up without loss of class time?
Is there evidence of planning, organization and defined goals?
Is class time used effectively?
Is safety a primary concern at all times?

Content and Nature of Presentation

Does the content of the lesson seem relevant? Can the students see meaning?

Does the teacher have adequate knowledge of the subject?

Does the presentation involve the students? (questions, opinions and responses)

Who has the decision as to the content within a given framework?

On what level are the majority of the questions?

Does the class appear challenged, interested?

Are the means of presentation varied?

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FIG. 1

Classroom Observation Design
(Mathematics)

Fig. 2

CONCERNS	QUESTIONS
Student Participation. Statement of students and teachers. Student interaction and learning. Completion of work.	INVOLVEMENT: Record extent/level of general student participation. Quantify Questions, Responses, Statements of Teachers & Students. Note number of verbal participants. Note number of students interacting with one another. For Individual/Small Group Work: note time on task, task completed, movement, facial expressions, etc. Note extent of involvement with activities unrelated to Content.
Enthusiasm. Attitude. Personal characteristics. Knowledge. Space usage. Open to questions from students. Consistent role and goals.	TEACHER BEHAVIOR: Does the teacher ask higher order questions? Does the teacher vary the kinds of questions? Where is the teacher in the classroom and how long? Does the teacher know the material or is he constantly referring to the book or notes? Does the teacher accept and pursue questions from students, or dismiss them? Does teacher have a specific objective he is trying to accomplish? Does teacher vary voice control and facial expressions?
Structure. Discipline. Student attention. Consistent rules.	CONTROL: How is class time structured? Who controls patterns of interaction and kinds of activities present? How? How much time is spent controlling misbehavior/off-topic activities? What rules are evident? Are they evenly applicable?
Flexibility. Relevancy. Diagnostic. Objective. Evaluation. Different types of instruction.	TEACHER SKILLS: Does the teacher use different teaching approaches and mediums? Does the teacher relate the material to the students, and ways they can use it? Is the teacher able to explain the material in different ways if it is not understood? Does the teacher summarize, and check to see if the class understands?

Peer interaction.
Challenge.
Fun-recreation.
Relaxed.
Fair.

ENVIRONMENT: Is there peer interaction? How much,
how many, related or unrelated?
Are extra problems or challenges given
to the students?
Is the class totally quiet, or is there
some interaction? How much?
Does the teacher smile or joke? How
much?
Does the teacher play games or provide
some recreation within the subject?
Are all students questioned, and
treated equally and fairly?
Is some talking allowed, or is there
dead controlled silence?
Are students helped and disciplined
equally?

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FIG. 2

References

- ¹ Consult Simon, Anita, and Boyer, E. Gil. Mirrors for Behavior III - An Anthology of Observation Instruments. Wyncote, Penna.: Communication Materials Center, 1974.
- ² Dwayne Huebner, Professor of Education, Teachers College (Columbia University) first suggested this idea.
- ³ The knowledge base to be drawn upon consisted, additionally, of the requirements of each discipline to be taught, the learning process, and child development studies.
- ⁴ The development of Designs occurred within a three-week introductory course, Teacher, School & Society, offered prior to commencing student teaching. The classroom became a laboratory for the study of teaching as students taught each other the various content areas (problems of beginning teachers, classroom interactions, alternatives in education, for example). Their teaching behavior was then analyzed from the perspective of student Designs.
- ⁵ It goes without saying that the supervisor plays an active role in identifying key episodes within a teaching session. He must point out what may have been overlooked by the intern.

Bibliography

- Bruner, Jerome. The Process of Education. New York: Vintage Books, 1960.
- Buber, Martin. I and Thou. New York: Scribner's, 1970.
- Carlson, Richard. Adoption of Educational Innovations. Eugene, Oregon: The University of Oregon, 1965.
- Dewey, John. Democracy and Education. New York: Macmillan, 1963a.
- . Experience and Education. New York: Collier Books, 1963b.
- Dunkin, Michael, and Biddle, Bruce. The Study of Teaching. New York: Holt, Rinehart & Winston, 1974.
- Freire, Paulo. Pedagogy of the Oppressed. New York: Herder & Herder, 1970.
- Joyce, Bruce, and Weil, Marsha. Models of Teaching. Englewood Cliffs, New Jersey: Prentice-Hall, 1972.
- Kelman, Herbert C. "Processes of Opinion Change." The Planning of Change. Edited by Warren Bennis, et al. New York: Holt, Rinehart & Winston, 1969: 222-230.
- Lewis, Arthur J., and Miel, Alice. Supervision for Improved Instruction. Belmont, Calif.: Wadsworth Publishing Co., 1972.
- Lieberman, Ann, et al. "Working Together: The Peer Group Strategy." The Power to Change: Issues for the Innovative Educator. Edited by Carmen Culver and Gary Hoban. New York: McGraw-Hill, 1973.
- Macdonald, James. "The Quality of Everyday Life in School." Schools in Search of Meaning. Edited by James Macdonald and Esther Zaret. Washington, D.C.: ASCD, 1975.
- Piaget, Jean. Genetic Epistemology. New York: W. W. Norton, 1970.
- Schachtel, Ernst. Metamorphosis. New York: Basic Books, 1959.

Simon, Anita, and Boyer, E. Gil. Mirrors for Behavior III - An Anthology of Observation Instruments. Wyncote, Penna.: Communications Materials Center, 1974.

Sutton-Smith, Brian. "The Useless Made Useful: Play as Variability Training." School Review, 83, No. 2 (February 1975): 197-215.